

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 10, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Frank Harshman and Clinton Jones, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for the Week Ending November 11, 2022

**Criticality Safety:** Fissile material handling activities in Building 9204-2E resumed on Wednesday, November 2 and operations utilizing birdcages in Building 9212 resumed on Monday, November 7. The resident inspectors observed the initial execution of the standing orders and enhanced oversight plans that CNS put in place due to the recent birdcage loading issues found in Building 9204-2E and Building 9212 (see 11/4/2022 and 10/28/2022 reports). In the standing order created by the director of Building 9212, a new appendix, that requires the workers to document key attributes of the part, was created that is to be placed on all birdcages being loaded. The appendix is a compilation of the existing material handling requirements that allows personnel to verify compliance with the material handling procedures prior to moving the birdcages. In contrast, the standing order created by the director of Building 9204-2E directed the material handling workers to follow specific sections of material handling procedures and only clarified two general terms. The clarifications drive the creation of a new label, as stated in the existing procedure, to easily identify key attributes to verify material handling procedure compliance. Enhanced oversight in Building 9204-2E is in place for both conduct of operations and criticality safety compliance and is being performed by the disciplined operations group with the assistance of criticality safety engineers and criticality safety officers. The enhanced oversight plan remains in effect until specific birdcage loading operations have been completed at least three times, with the option to extend the additional oversight if necessary. The enhanced oversight in Building 9212 includes facilities operations management personnel and production management in addition to the disciplined operations group and nuclear criticality safety staff. The Building 9212 standing order remains in effect until the Director of Enriched Uranium Operations rescinds it or May 5, 2023, whichever occurs first. NPO facility representatives are evaluating the effectiveness of the enhanced oversight plans in both buildings and will feed this information into NPO's reactive assessment.

**Building 9212:** CNS submitted a Safety Basis Supplement (SBS) for Building 9212 Dock 8A associated with an increased seismic risk based on the results of the 10-year Y-12 site Probabilistic Seismic Hazard Analysis (see 3/27/2020 report). CNS is requesting NPO approval of the slight increase in seismic risk for Dock 8A with no additional controls based on their assessment of the robustness of the existing control set and the limited remaining life of the Oxide Conversion Facility (OCF). If the SBS is approved, CNS intends to continue OCF operations until the end of June 2023, regardless of if the one remaining hydrogen fluoride cylinder utilized in this process is depleted (see 9/16/2022 report). CNS is utilizing DOE-STD-1020-2016, *Natural Phenomena Hazards Analysis and Design Criteria for DOE Facilities*, in determining that it is not necessary to upgrade any facility structures, systems, or components (SSCs) for Natural Phenomena Hazards mitigation, provided that the conditions in the facility do not warrant the designation of "exceptionally high risk." CNS concluded that Dock 8A facility and process do not constitute "exceptionally high risk;" and therefore, has deemed that the SSCs remain adequate to perform their intended safety function for the short remaining service life without re-analysis or upgrades.